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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,438	06/03/2005	Yoshinari Koyama	273255US0PCT	3230
22850	7590	03/25/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
KUGEL, TIMOTHY J				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
03/25/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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## Office Action Summary

**Application No.**

10/537,438

**Applicant(s)**

KOYAMA ET AL.

**Examiner**

TIMOTHY J. KUGEL

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-26 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/86)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

### **DETAILED ACTION**

1. Claims 1-26 are pending as filed on 3 June 2005.

#### ***Restriction Requirement***

2. Restriction is required under 35 USC 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted:

Group I, claims 1-14, drawn to aqueous sols and processes of making aqueous sols.

Group II, claims 15-26, drawn to coating compositions and optical elements comprising said coatings.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the various embodiments of the sols and coating compositions comprise different particle nuclei (SnO<sub>2</sub> particles and SnO<sub>2</sub>/ZrO<sub>2</sub> composite particles) different particle coatings (alkylamine-Sb<sub>2</sub>O<sub>5</sub> coatings and SiO<sub>2</sub>-Sb<sub>2</sub>O<sub>5</sub> coatings).

#### ***Election of Species Requirements***

##### **A**

3. Regardless of the invention elected above, this application contains claims directed to more than one species of the generic invention. These species are deemed

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to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

The sol particle nuclei comprising SnO<sub>2</sub> particles and  
The sol particle nuclei comprising SnO<sub>2</sub>/ZrO<sub>2</sub> composite particles.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. See MPEP § 809.02(a).

4. The claims are deemed to correspond to the species listed above in the following manner:

SnO<sub>2</sub> particles—Claims 2, 5, 7, 9, 11, 13, 16 and 20  
SnO<sub>2</sub>/ZrO<sub>2</sub> composite particles—Claims 3, 6, 8, 10, 12, 14, 17 and 21  
Generic—Claims 1, 4, 15, 18, 19 and 22-26.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: each species of sol

particle nuclei has a different composition and would therefore have different chemical and physical properties.

**B**

5. Regardless of the invention elected above, this application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

The sol particle coating comprising an alkylamine-Sb<sub>2</sub>O<sub>5</sub> compound and  
The sol particle coating comprising a SiO<sub>2</sub>-Sb<sub>2</sub>O<sub>5</sub> compound.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. See MPEP § 809.02(a).

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6. The claims are deemed to correspond to the species listed above in the following manner:

Alkylamine-Sb<sub>2</sub>O<sub>5</sub> compound —Claims 1-3, 7-10 and 15-18  
SiO<sub>2</sub>-Sb<sub>2</sub>O<sub>5</sub> compound —Claims 4-6, 11-14 and 19-22  
Generic—Claims 23-26.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: each species of sol particle coating has a different composition and would therefore have different chemical and physical properties.

**C**

7. Should applicant elect to proceed with the invention of Group I above, this application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

The process with or without a hydrothermal treatment in step (a).

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. See MPEP § 809.02(a).

8. The claims are deemed to correspond to the species listed above in the following manner:

Without a hydrothermal treatment—Claims 7, 8, 11 and 12  
With a hydrothermal treatment—Claims 9, 10, 13 and 14  
Generic—Claims 1-6.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the species of with or without a hydrothermal treatment would produce sols with different particle sizes and/or compositions and therefore different physical properties.

**D**

9. Should applicant elect to proceed with the invention of Group I above, this application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

The process with or without an anion exchanger step (d).

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. See MPEP § 809.02(a).

10. The claims are deemed to correspond to the species listed above in the following manner:

Without an anion exchanger step—Claims 7, 9, 11 and 13  
With an anion exchanger step—Claims 8, 10, 12 and 14  
Generic—Claims 1-6.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the species of with or without an anion exchanger step would produce sols with or without anions in solution and therefore with different chemical properties.



**E**

11. Should applicant elect to proceed with the invention of Group II above, this application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

The silicon containing substance—Formula I or II of claims 15 and 19.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. See MPEP § 809.02(a).

12. The following claims are generic: 15-26.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Each different silicon

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containing substance would form a different coating composition having different chemical and physical properties.

***Election***

13. In light of the complexity of the restriction requirement for this application, no telephone communication regarding the restriction has been made. See MPEP § 812.01.

14. **Applicant is advised that the reply to this requirement to be complete must include:**

(i) an election of an invention to be examined even though the requirement may be traversed (37 CFR 1.143) and

(ii) an election of a species of sol particle nuclei to be examined even though the requirement may be traversed (37 CFR 1.143) and

(iii) an election of a species of sol particle coating to be examined even though the requirement may be traversed (37 CFR 1.143) and

(iv) if Group I is elected in (i) above, an election of a species of process with or without hydrothermal treatment in step (a) to be examined even though the requirement may be traversed (37 CFR 1.143) and

(v) if Group I is elected in (i) above, an election of a species of process with or without an anion exchanger step (d) to be examined even though the requirement may be traversed (37 CFR 1.143) and

(vi) if Group II is elected in (i) above, an election of a species of silicon-containing substance to be examined even though the requirement may be traversed (37 CFR 1.143) and

(vii) identification of the claims encompassing the elected invention and each species.

15. The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

16. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Conclusion***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached 6:00 AM – 4:30 PM Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Timothy J. Kugel/  
Patent Examiner, AU 1796